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PILOT RESEARCH PROJECT OF TECHNIQUES USED IN TEACHING A UNIT ON CHILD DEVELOPMENT.

BY- SIMPSON, RUBY AND OTHERS
KENTUCKY UNIV., LEXINGTON

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A HOME ECONOMICS UNIT, "LIVING WITH SMALL CHILDREN," WAS SELECTED FOR A PILOT RESEARCH PROJECT FOR EVALUATING THE EFFECTIVENESS OF PROCEDURES USED IN TEACHING CHILD DEVELOPMENT. THE 4-WEEK UNIT WAS TAUGHT IN SEVEN SCHOOLS WITH NINE HOME ECONOMICS TEACHERS PARTICIPATING. THERE WERE 18 CLASSES OF HOMEMAKING I AND 315 STUDENTS. SUGGESTIONS FOR EFFECTIVE TEACHING WERE (1) HOMEMAKING I SHOULD CONTAIN A UNIT IN CHILD DEVELOPMENT, AS 71 PERCENT OF THE GIRLS SAID THEY DID BABY-SITTING, AND 60 PERCENT HAD SOME RESPONSIBILITY FOR THE CARE OF YOUNGER CHILDREN IN THEIR FAMILIES, (2) AN INTEREST CHECKLIST SHOULD BE GIVEN TO PUPILS BEFORE THE TEACHER PREPLANS THE UNIT FOR THERE WERE SIGNIFICANT DIFFERENCES IN INTEREST IN 22 ACTIVITIES AMONG THE 18 CLASSES, (3) A VARIETY OF LEARNING EXPERIENCES CONTRIBUTES TO EFFECTIVE CHANGING OF PUPIL BEHAVIOR (AN AVERAGE OF 14 DIFFERENT TECHNIQUES WAS USED), (4) PLANNING EXPERIENCES WHICH ALLOW THE PUPILS THE OPPORTUNITY TO SHARE THEIR NEWLY ACQUIRED INFORMATION ARE ESSENTIAL FOR EFFECTIVE TEACHING, AND (5) THE USE OF THE PROBLEM-SOLVING TECHNIQUES ADDS TO THE TEACHING EFFECTIVENESS. THE TEACHER WHO WAS JUDGED TO HAVE USED THE MOST EFFECTIVE TECHNIQUES UTILIZED THE MOST STEPS FROM THE PROBLEM-SOLVING PROCEDURE. THE APPENDIX INCLUDES TOPICS, GOALS, AND GENERALIZATIONS FOR THE UNIT USED. (MS)

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A PILOT RESEARCH PROJECT OF TECHNIQUES USED IN TEACHING A UNIT ON CHILD DEVELOPMENT

Home Economics Education
College of Education
University of Kentucky
1965

VT000023

Research projects in Home Economics Education in Kentucky are coordinated through a Research Committee. The Research Committee is made up of two members of the home economics supervisory staff, State Department of Education and three members from three institutions of higher education in Kentucky. The Committee's responsibilities center on selection of research projects and development of general guides. The members from the institutions of higher education constitute a research Team. The Team members plan research projects, execute the procedures, summarize the data, write the report, and disseminate the findings.

INTRODUCTION

Enrollment in Home Economics in High Schools in Kentucky[1] was completed in 1963. The direction for research projects in Home Economics Education in Kentucky was determined, in part, from the findings and recommendations of the Enrollment study.

The Enrollment study revealed that the quality of the home Econims program was the most influential factor in causing girls to elect to take or not to take home economics. Two factors influenced pupil enrollment in home economics. They were teaching techniques used and the depth of learnings in the seven areas of home economics. Child development, consumer education, and housing and home furnishings were the areas of home economics that ranked lowest in amount of help received by the girls in senior-high school.

With this background of findings from the Enrollment study, a pilot research project was organized to deal with improving the quality of teaching child development. The research project had as its purpose evaluating the effectiveness of procedures used in teaching a unit on child development.

The research Team[2] cooperated in the project. The planning of the project and the seminar held for the participating teachers of home economics was done by the research Team. Team members assumed responsibilities for developing evaluation devices, for analyzing the lesson plans, for analyzing the teachers' observations of pupils' attitudes toward small children, for designing the programs, for analyzing the data at the Computing Center, and for analyzing the pupils' written statements for generalizations regarding young children. The report to the State

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[1] Ruby Simpson, Lucile Stiles, and Anna M. Gorman. Enrollment in Home Economics in High Schools in Kentucky. Lexington, Kentucky: University of Kentucky, College of Education, August, 1963.

[2] Ruby Simpson, Home Economics Department, Murray State College, Murray; Lucile Stiles, Home Economics Department, Western Kentucky State College, Bowling Green; and Anna M. Gorman, Coordinator, College of Education, University of Kentucky, Lexington.

Department of Education was prepared by the reasearch Team. This publication was prepared by the Coordinator for distribution to the home economics teachers in Kentucky.

Objectives

The research project "A Pilot Study of Techniques Used in Teaching a Unit on Child Development" was to be completed within the 1963-64 school year. Therefore, the objectives of the project were limited to those aspects of such a study which could be completed during this period. The objectives were:

1. To develop devices for use in evaluating change in pupil (a) attitudes toward young children and (b) developing generalizations related to child development.

2. To develop a method of determining teaching techniques used by teachers.

3. To determine the relationship between the procedures used in teaching and the pupil's attitudes toward an understanding of young children.

4. To assess the ability of pupils to generalize on matters related to child development.

The Teaching Unit

The first unit on child development is usually taught in Kentucky at the 9th grade level, Home Economics I. This unit "Living with Small Children"[1] was selected as the teaching unit for the research project.

Time to teach the unit was limited to four weeks. The unit was organized by the research Team to include four topics with 14 goals. The generalizations or "Big Ideas" which appeared to be relevant, or to apply to the goals, were selected for the list of child development generalizations developed at the Merrill Palmer Workshop in the summer of 1963. The generalizations selected were further refined by the research Team and the participating home economics teachers. The topics, goals, and generalizations used in the research project appear in the Appendix, pages 15 to 18.

The Hypotheses

The research project was organized to collect data for analysis related to the following hypotheses.

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[1] Kentucky Home Economics Curriculum Guide, Frankfort, Kentucky: State Department of Education, Division of Vocational Education, June 1955, p. 37.

1. Problem solving is an effective procedure to use in teaching child development.

2. A variety of experiences is needed to develop generalizations and to make applications.

3. Effective teaching procedures include:

   a. Working on a problem recognized by the pupils
   b. Guiding pupils to secure information with a purpose
   c. Leading pupils to develop statements of generalizations
   d. Encouraging pupils to make use of generalizations
   e. Providing experiences which are appropriate for the learning levels of the pupils
   f. Guiding pupils to evaluate progress made toward the goal or solution of the problem.

4. Experiences with children are instrumental in developing a positive attitude toward children.

Selection of the Home Economics Teachers

Each member of the research Team visited public schools located near her college or university. The name of the home economics teacher(s) and the administrator of the school were submitted to the State Director of Home Economics Education if: 1) the teacher and administrator had positive feelings toward the project; 2) the unit in child development had not been taught; 3) there appeared to be excellent rapport between the teacher and the pupils; 4) the teacher could have released time for a training session; and 5) the teacher and pupils were not too disturbed by having an observer in the classroom. The State Director of Home Economics Education contacted the administrators of the schools selected for the research project. Seven schools with nine home economics teachers agreed to participate in the project. There were 18 classes of Home Economics I, with 315 pupils participating.

Procedures

1. A research seminar was held for the nine participating teachers at Bowling Green in January, 1964. The research Team reviewed the research project, reviewed principles of lesson planning, discussed and altered the generalizations related to child development, provided each home economics teacher the evaluation forms to be completed during the research project, and provided each teacher time to study materials and aids which could be helpful in teaching the unit.

2. In February, the teachers returned to the Coordinator the "All About Her" questionnaires for all 315 pupils. The questionnaire requested personal information about each pupil in the research project. Since no particular sampling technique was used to select the participating pupils, the data collected were used to assist in determining how pupils and classes were alike or different.

3. Also in February, the teachers sent the Coordinator the completed

check list on "What Experiences Have You Had with Young Children?" The check list gave data relative to brothers and sisters, experiences in caring for children, and experience and interest in 22 activities with young children.

4. Lesson plans were used to determine the techniques each teacher used. The teachers agreed to send lesson plans to a member of the research Team each week. All changes in the lesson plans which occurred during the actual teaching were noted on the plans. To determine if the pupils recognized the techniques used by the teacher, each class member was given five minutes each day to complete a form "Today We". The information recorded in the forms, completed by the students, was used to compare with the teachers' lesson plans. Approximately 180 daily lesson plans and 6,000 pupil forms were analyzed.

The lesson plans gave a fair picture of the kinds of techniques used by the teachers. However, a judgment could not be made on how effective each teacher was in using the techniques and the appropriateness of the technique for the pupils and the goals.

The research project estimated the effectiveness of the techniques used by gains in attitudinal scores and gains in knowledge of generalizations about young children. The changes (or gains) were determined by using the pretest technique (giving tests to pupils before the unit was taught) and the post test technique (giving the same tests after the unit was completed.)

5. Since the research project was concerned with the effect of techniques of teaching child development upon attitudes of pupils toward young children, an attitudinal check list was developed. The principal or guidance counselor in each school gave the attitude check list, "How Do You Feel About Young Children?", before the unit was started. The only limitation given to the teachers was that 20 lessons had to be completed by the middle of May. The post test was given to the pupils the day after the unit was finished. The pre-and post-tests were sent to the Coordinator for scoring.

6. The research project was also concerned with the effect of techniques used in teaching a unit in child development upon the pupils' understanding of the "Big Ideas" or generalizations related to the unit. A multiple-choice test "Living with Small Children" was developed. The principal or guidance counselor in each school gave the pupils a knowledge test before the unit was started. The post test was given to each pupil the day after the unit was completed. The pre-and post-tests were sent to the Coordinator for scoring.

7. One of the objectives of the project was to actuate the ability of pupils to develop generalizations related to the area of child development. Since the oral evolving of generalizations during the classroom experiences could not be accurately recorded (because of the lack of continuous observations), a device, "In class this week, the 'Big Ideas' I learned were", was developed. Once a week each pupil was given 15 minutes to write down the "Big Ideas" or generalizations she had learned about young children during the week. The completed forms were sent to the Coordinator, weekly.

The Coordinator and graduate student in Home Economics Education evaluated the pupils' written statements from the "This Week" form. A written expression was judged to be a generalization when the basic ideas and/or principles of child development were involved in the statement. Approximately 1,250 completed forms were returned, and 292, or 92 percent of the 315 pupils wrote 3,861 statements which were judged to be statements of generalizations about young children.

8. To validate the findings obtained from the attitude check list, the teachers were encouraged to record observations of the pupils when attitudes toward children were expressed. The completed observation forms were returned periodically during the instructional period.

Summary and Conclusions

Personal Data about the Pupils

When the variables related to personal characteristics were considered, the pupils enrolled in the 18 Home Economics classes in the seven high schools were more alike than different. There were no significant differences among the 18 classes in the following categories.

1. Ninety-nine percent of the girls were between 14.1 and 15 years of age.

2. Most of the pupils were living in households with both mother and father.

3. Seventy percent of the pupils had fathers with occupations in the skilled, unskilled, or farming categories.

4. Less than 25 percent of the fathers had a high-school education or better.

5. Seventy percent of the mothers were full-time homemakers; those who were employed outside the home had jobs which which classified them as unskilled laborers.

6. Thirty-one percent of the mothers had completed high school.

7. Eighty-five percent of the pupils came from homes where there were seven or more modern conveniences; 57.2 percent were from homes with nine or more conveniences.

8. Twenty-seven or 8 percent of the 315 pupils did not have brothers or sisters.

9. Fifty percent of this group had three or less brothers and/or sisters. Four and one-tenth percent had nine brothers and/or sisters. The age groupings were evenly distributed among younger and older brothers and sisters.

10. Sixty-eight percent reported they did not have a single

health handicap.

11. Eighty-eight percent of the group were not paid for taking care of their brothers or sisters.

12. Seventy-one percent, or 311 of the pupils, said they did babysitting.

    a. Sixty-one and eight-tenths percent reported being paid for babysitting.
    b. The pupils did babysitting "occasionally" rather than according to a regular schedule.
    c. The pupils did babysitting for a two-hour period, for the entire afternoon or evening, or all day.

13. The teachers rated 40 to 60 percent of the pupils enrolled in their classes as being "above average" in personality characteristics: attractiveness; likableness; friendliness; sportsmanship; cooperativeness, and enthusiasm. The teachers rated their pupils "average" on maturity of behavior.

14. The teachers listed intelligence scores for 272 or 89 percent of the pupils. The pupils by classes varied in average intelligence. One class had an average intelligence score of 84.9; another class an average of 112.6. Even though there was a wide range in average class intelligence, these differences had little relationship 1) to the ability of pupils to write statements of generalization (r = .10), 2) to score high on the post-attitude check list (r = .23), and 3) to the ability to score high on the post-knowledge generalization test (r = .20)

There was a significant difference in one category of personal data for the pupils. The pupils in some classes resided in areas which were mostly rural, while others resided mainly in urban areas.

Pupils Interest in Young Children

There were 314 pupils who completed the form: "What Experiences Have You Had with Young Children?". One part requested a checking of an interest column eliciting 22 experiences with young children. Approximately 70 percent checked 10 or more of the 22 experiences in the interest column. There were no significant differences among the 18 classes regarding the number of interest items checked. Thus, the students in the study were interested in learning more about young children. This conclusion is reinforced by the fact that only 14.5 percent checked 10 or more items in the "no" interest column.

Changes in Attitudes

The "How Do You Feel About Young Children?" check list was completed by the 315 pupils both as a pretest and as post-test measure of attitude towards children. A wide range of individual scores resulted on both

administrations of the attitudinal check list. The highest individual score on the pretest was 139.5 out of a possible 150 points; the lowest 51. The highest individual score on the post-test was 138.5; the lowest 90. The average score for the 18 classes on the pretest was 120.52; the post-test average 122.27 -- a positive gain of 1.75 points on the post test over the pretest average. Therefore, the check list was discriminating, and the pupils had more positive attitudes toward children (as measured by the "How Do You Feel About Young Children?" check list) after they had studied the unit on child development.

Even though no statistical tests of significance could be computed among the average scores made by the different classes, some of the classes had greater positive gains in average scores than did some of the other classes. Class #7 made the greatest gain in average score on the attitude check list between the pretest and post test -- a gain of 7.8 points. Class #15 made the second greatest gain in average -- gain of 6.2 points.

Reactions of the Pupils

As the home economics teachers taught the unit "Living with Small Children," they kept a record of the reactions of their pupils toward young children and also a record of pupils' reactions toward various class experiences. Of the total observations made, 249 evidenced positive pupil responses toward young children. The positive response data from the forms were analyzed 1) by categories of types of attitudes expressed and 2) by technique employed by the teacher at the time the reaction occurred.

Of the 249 positive responses listed, 105 or 41 percent were classified as observations revealing an increased interest in young children. For example, a teacher wrote "I observed how wide-eyed and attentive the children were as they listened for details of a story the librarian told about a small child." Sixty-nine responses were tabulated in the change of attitudes category. Forty-seven observations gave clues that the pupils were interested in gaining a better understanding of children. A teacher wrote that her " . . . pupils were searching for information in most of the libraries within a 20-mile radius of the school." Twenty-eight were classified as public reactions toward the unit.

At the time the 249 positive reactions were occurring, the teachers were using 16 different techniques. The largest proportion, or 56 percent, of reactions reported by teachers occurred as the pupils entered into discussions, gave reports of readings, participated in "Buzz" sessions, completed check lists, and participated in "popcorn" sessions. This suggested that pupils developed an interest in young children and were apt to do so when they were participating in the learning experience themselves.

Changes in Knowledge

The "Living With Young Children" pre-and post-tests were given to 315 pupils to determine if the pupils had a better understanding of the "Big Ideas" or generalizations related to child development after completing the unit. The highest possible score was 40. The average score made by the group on the pretest was 15.67 points; the average score on the post test was 16.29 -- a positive gain was .62 of a point. The highest score made on the pretest was 32 points; the lowest 2. The lowest score made by

a pupil on the post test was 3. This test was very difficult for the pupils as revealed by the number of items missed on both the pre- and post- tests.

No statistical treatment could be made of the test-score data, related to differences in average class scores for the 18 classes. Some of the classes made greater gains in average scores. Class #8 made the greatest gain -- 3.47 points. Class #2 made the second greatest gain -- 3.3 points.

Generalizations Written

Approximately 1,250 of the "Big Ideas" forms completed by the 315 pupils were returned for analysis during the teaching of the unit on child development. Each statement was analyzed before it was judged as to whether or not the statement was a generalization about young children. Of all the statements written by these pupils, 3,861 were judged to be generalizations about young children.

The average number of generalizations written per pupil was 12.31. The average range of statements per student per class was 44.87 to 2.47.

No statistical analysis was used to establish a significant level. However, great differences existed among the classes. The pupils in class #7 wrote the greatest number of statements of generalizations about young children -- an average of 44.87 per pupil. Class #8 ranked second highest with an average of 28.82 statements per class member.

No classification was made regarding the levels of the generalization written. The generalizations written by the pupils were analyzed by comparing them with the generalizations planned by the teachers. A few examples of the comparisons follow.

Teacher Planned	Written by the Pupils
Habit is a behavior which through practice is accomplished without conscious thought of what is being done.	Habits are things we do and because of repetition, we are unconscious of the doing.
Each individual is unique in his rate of development.	Not all people develop at the same rate.

Twenty-three pupils or 7.3 percent of the 315 failed to write a single generalization during the four-week unit. Some examples of their written expressions, which are not generalizations, appear below.

"The 'Big Ideas' I learned this week were"

--"the types of clothing children should wear and what we should look for in choosing this clothing"

--"the value of play and the characteristics of good equipment."

The range in IQ's for the group of "non-writers of generalizations"

ranged from 79 to 120; the average was 92.43. From this range in intelligence scores, it is evident that (1) motivation and interest of pupils and (2) the way they were taught, was a more powerful influence on ability to write statements of generalization than intellectual ability. The correlation between intelligence scores and number of generalizations written for the group was r = .10, which revealed an almost negligible relationship.

Techniques of Teaching Used

The nine teachers were free to select the techniques they wanted to use in teaching the "Living with Young Children" unit. They sent in 180 lesson plans for analysis during the time they dealt with the unit. There was a quantitative aspect of reporting of the techniques used --- how many different techniques were used? The qualitative aspect of techniques was only done in relationship to 1) positive changes in attitudes toward children, 2) positive changes in understanding of generalized statements about children, and 3) ability to write generalizations about children.

Analysis of Techniques for the Entire Group

A variety of techniques was used by the teachers. They used an average of 14 teaching techniques during the 20-teaching days. One teacher utilized 22 techniques in teaching the unit.

No conclusions were reached regarding the effect of classroom observation on children. The teachers did not use sufficient classroon experiences with children to enable valid conclusions to be drawn.

Four aspects of the teaching process were prevalent in the lesson plans used by teachers. The first aspect had to do with "searching for" and acquiring information pertinent to the problem. The teachers used techniques such as having students read references, showing of films and filmstrips, and use of guest speakers.

The second phase common in the techniques used by the teachers was "talking about" or sharing of the findings by the pupils. The pupils discussed, listed, "buzzed", and reported.

The third aspect of the teaching-learning process, which all teachers utilized, involved assignments. The 315 pupils who participated were required to read, search for additional information, prepare reports, and observe children outside-the-classroom. The use of this technique may account (in part) for the teachers and the pupils being able to complete the scope of generalizations, which they did, in four weeks.

The fourth aspect of teaching, which six of the nine teachers used, had to do with summarizing or drawing conclusions related to the problem under study.

Eight of the nine teachers utilized, to a certain extent, the problem-solving approach to learning. Results indicated that pupils under these teachers were better able to write statements of generalizations.

Techniques Judged to be Most Effective

The techniques of planning and teaching used by one of the home economics teachers were analyzed. The techniques were analyzed because the pupils in the two classes she taught: 1) achieved the greatest positive changes in attitudes toward children; 2) made the greatest gain in average score related to understanding of generalizations about young children, and 3) wrote the greatest number of generalized statements about young children. The following findings were drawn from analyzing the techniques used by this teacher.

1. Lesson planning

    a. Different lesson plans were used for the two classes, thus making allowances for individual differences between the two classes.

    b. The original list of generalizations were reworded so that the statements were more appropriate for the problems and the goals of each class.

    c. Generalizations were written out in the lesson plans.

    d. Many generalizations related to young children were incorporated in the teaching situation.

2. Techniques used.

    a. The greatest variety of teaching techniques was used by this teacher during the four weeks.

    b. References, films and filmstrips, demonstrations, exhibits, bulletin boards, guest speaker, charts and posters, and observation of children were techniques utilized to assist the pupils to gain knowledge of young children.

    c. "Brain storming," skits, discussions, "buzz" sessions, reports, and debates were planned which enabled the pupils to be actively involved in learning by expressing their findings and ideas.

    d. Techniques were used which allowed the pupils the opportunity to summarize the data presented in the class. For example, the pupils listed conclusions and summaries on the board.

    e. The greatest number of assignments were made during the teaching of the unit. The assignments varied for the different pupils.

    f. All steps in the problem-solving procedure were more consistently used in the teaching of the lessons.

3. Class unit planning

    This teacher chose not to teach both of her classes at the same time. The second class was started approximately two weeks after starting the first class.

Clues for Teaching and Evidence from the Study

Even though statements of a generalized nature regarding effectiveness of different teaching procedures cannot evolve from one pilot research project, invaluable clues emerge which give direction for improving the quality of teaching. The following clues regarding the effectiveness of teaching procedures, with evidence accumulated from the research study, are enumerated.

Clues for Effective Teaching Procedures	Evidence from the Pilot Study
1. The program of study in Home Economics I should contain a unit in child development because pupils of this age are interested in learning about young children and they need these learnings.	1. Seventy percent of the group checked the interest column for 10 or more of the 22 experiences with young children. Only 14.5 percent checked 10 or more items in the "no" interest column. The pupils were interested in learning about young children. Seventy-one percent of the girls said that they did baby-sitting. Also, 60 percent had some responsibilities for the care of younger children in their families. The girls need such experiences.
2. Each class studying child development should have lessons planned especially for individual needs, interest, and abilities of the pupils.	2. The greatest positive changes in attitudes toward young children, in understanding of generalizations related to young children, and in ability to develop statements of generalization about young children, occurred in situations where the two Home Economics I classes were taught by a teacher who made different lesson plans for each class.
3. When a teacher is assigned two classes of Home Economics I to teach, the teaching of the "Living with Young Children" unit is more effective when the two classes do not concide on the block plan. When similar units are not taught during the same time period, the teacher is more effective in planning for the individual class needs. And, this practice may remove some of the monotony and repetitiveness associated with reteaching the same lesson the same day.	3. The plan for having one class start the unit on child development approximately two weeks later than the other, was done by only one home economics teacher in the research project. The pupils in the two classes which were involved in this type of planning made the greatest positive changes in attitudes toward young children, in understanding of generalizations related to young children, and in ability to develop statements of generalization about young children.

4. In planning for the learning experiences in a unit in child development, an interest check list should be given to pupils before the teacher does the pre-planning for the unit. Pupil-teacher planning should be used in setting up the goals for the unit.	4. From the "What Experiences Have You Had with Young Children?" form, it was found that there were significant differences among the 18 classes related to depth of interest in the 22 activities. The pupils who made up the membership in the different classes were not interested in having similar learning experiences related to young children.
5. When the child development learnings are centered on teaching for generalizations, teaching plans should be organized with focus on the "Big Ideas" or generalization of the unit.	5. The nine home economics teachers cooperating in the research project planned for teaching of generalizations related to the unit. They were very successful. It was found that Home Economics I pupils were able to generalize about young children.
6. In planning to teach for generalization, the teacher must provide (plan for) the pupils with the opportunity to express their discovery of "Big Ideas".	6. In the research project, the pupils were given 15 minutes each week to write the "Big Ideas" or generalizations about young children they had learned. The pupils wrote over 3,860 statements which were judged to be generalizations about young children.
7. Lesson plans should contain the statements of generalization about young children which are to be taught. The statements of generalization should be in the language to be taught (in the teacher's own words.)	7. One of the lesson-planning procedures used was the teacher writing statements of generalization in her own words on the lesson plans for each of the classes she taught. This procedure was effective because it enabled the pupils in two classes (taught by the teacher who employed this procedure) to be most successful in writing statements which were judged to be generalizations about young children.
8. A variety of learning experiences (different techniques) contributes to effective changing of pupil behavior.	8. The 315 pupils in the research project made positive changes during the unit in child development. They made higher average scores on the attitude and knowledge evaluation instruments. They wrote statements which were judged to be generalizations about young children. All of the pupils were taught by home economics teachers who used a variety of teaching techniques. An average of 14 different techniques was used, and one teacher utilized 22 different techniques.

9. In planning to teach for generalization, experiences related to collecting or gaining knowledge and understanding of young children must be provided. The experiences may include reading references, observing demonstrations, observing films and filmstrips, hearing guest speakers, or observing children.

9. All of the teachers planned for experiences which enabled pupils to search for and acquire information related to the problems they were encountering in child development. This procedure was judged to be effective since an overwhelming marjority of the pupils were able to write generalizations about young children.

10. Planning experiences which allow the pupils the opportunity to share their newly acquired information are essential for effective teaching. This aspect of teaching can be accomplished by planning for discussions, listing, "buzzing", and reporting.

10. All of the teachers who participated in the study made use of procedures which involved sharing of learnings by the pupils. For example, the teachers would follow-up a film with a class discussion.

11. In order for pupils to generalize on learnings, experiences should be planned whereby the pupils can arrive at conclusions involving the utilization of past and present understandings of young children.

11. Six of the nine teachers made use of this aspect of teaching for generalizations. They used techniques which encouraged pupils to draw conclusions about the problem. The teacher who used techniques which were judged to be most effective, utilized this step many times with the pupils during the teaching of the unit.

12. To enable pupils to be able to change attitudes, acquire understandings, and arrive at generalizations, assignments should be planned for class members. The assignments will be more effective when they are geared to the needs of individual pupils.

12. All of the teachers used the technique of assignments. The teacher who was judged to have used the most effective teaching techniques, gave continuing assignments during the unit and also gave attention to individualized needs in making the assignments.

13. The use of the problem-solving technique adds to the effectiveness of the teaching of the unit on "Living with Young Children."

13. Eight of the nine home economics teachers more consistently used steps involved in the problem-solving technique. The teacher who was judged to have used the most effective techniques utilized more steps in the problem solving-procedure the greatest number of times.

We know that when a person is involved in a research project changes are brought about. The project stimulated the home economics teachers quest for effective teaching. They said the pupils were very proud of the fact that they had participated in a research project dealing with effectiveness of teaching techniques. Teachers can help us to further understand what techniques are effective in the attainment of certain teaching objectives.

WHAT MIGHT THIS STUDY MEAN TO TEACHERS?

**If teachers are using some of the techniques which were judged to be effective, they should pat themselves on the back and continue to use them.

**If teachers pick up different ideas for planning (lessons and/or units), for use of techniques, for evaluating changes in pupils, they should incorporate them into their teaching in all areas of home economics.

**Teachers should try wording generalizations (found in the Appendix) so they are meaningful to them. Then, attempt to teach for the "Big Ideas" or generalizations in child development.

**Utilize the practice of taking 5 minutes each day and 15 minutes at the end of each week for pupils to reflect on what they have learned. Have the pupils put their ideas together by writing them down.

**If teachers desire to use some of the evaluation instruments involved in the study, they should write the Coordinator.

APPENDIX

TOPICS, GOALS, AND GENERALIZATIONS
"LIVING WITH SMALL CHILDREN"

TOPIC I. Understanding the characteristics of children from 1 to 6 years of age.

GOAL A. To understand the patterns of human development within the age range of 1 to 6.

GENERALIZATIONS

1. Human development is the emerging and expanding of capabilities of the individual to provide progressively greater facility in functioning.
2. The developmental processes are intra-related throughout life and are achieved through growth (change in size), maturation (change not induced by learning), and learning (change through experience.)
3. The processes of growth, maturation, and learning indicate that the development of a person has two aspects. A child "grows" and "grows up". He "grows" in size; he matures "grows up" as a person.
4. For each stage of development, certain behavior can be anticipated. When the sequence of development is known, experiences can be provided which allow for maximum development and preparation for the next phase of development.
5. Human development is modified and enhanced by experience. Nutrition, activity, rest, psychologic challenge, ability and opportunity to learn, security in affection, understanding and adequate discipline, and many other circumstances are of great importance in determining how fast and to what extent the potentialities of the child will be realized.

GOAL B. To understand how children of the same family and unrelated group may resemble or differ.

GENERALIZATIONS

1. Each individual is unique in his rate of development.
2. Since individuals differ in the rate of development, no two individuals are alike although there are similarities within any stage of development.

TOPIC II. Guiding the development of children from 1 to 6 years of age.

GOAL A. To understand the meaning of behavior, discipline, guidance, needs, habits, and self.

GENERALIZATIONS

1. Guidance of children means treating (handling) them with a combination of affection and discipline so as to enable them to form functional behavioral patterns for their stage of development.

2. Discipline is defined as those controls, rules or courses of action placed on children, which being neither permissive or submissive, functions as a means of learning the expectations of individuals and groups.
3. Behavior is defined as those actions of the child which can be seen with the maturity of the actions dependent upon the stage of the child's development.
4. Needs are basic drives or motivating forces which are essential for activity.
5. Habit is a behavior which because of practice is accomplished without conscious thought of what is being done.
6. The self is a unique biological structure with unique experiences, purposes, and values.

GOAL B. To understand the importance of guidance in the child's development.

GENERALIZATIONS

1. Individuals learn who they are and what they are from the inter-actions with those who surround them throughout life.
2. The kind of adult the child models (follows) is one of the important determiners in choosing his (the child's) values.
3. Human behavior is "set off" or motivated by certain basic drives, needs, or urges. These motivating forces vary according to the child's social-emotional experiences.
4. One of the basic aspects of maturity is the ability to understand and accept reality.
5. The more secure the individual the more open he can be in relating to the world about him.

GOAL C. To develop guides for assisting the child as he: 1) attempts to fulfill his pattern of developmental needs, 2) strives to form habits at the various stages of development, and 3) forms behavioral patterns in a manner characteristic of his stage of development.

GENERALIZATIONS

1. When an individual is free to be himself, his behavior tends to be consistent with his values.
2. One learns that his behavior is acceptable only by being accepted.
3. Evading experiences reduce the chance to learn skills and abilities needed to cope with situations.

GOAL D. To develop ability in guiding the behavior of children from 1 to 6 years of age.

TOPIC III. Playing as related to development in children from 1 to 6 years of age.

GOAL A. To understand the importance of play in the lives of children.

GENERALIZATIONS

1. Socialization occurs when an individual learns the ways of a given group so that he can function within it.
2. An individual's level of maturation, previous learnings, aspirations, and uniqueness determine his selection of learnings from a given experience.
3. Individuals seek relationship with others to satisfy the need for recognition, affection, self-expression, and empathy.
4. Identification is the process by which a person attempts to be like another person.

GOAL B. To recognize the relationship between kinds of play (including equipment used) and developmental levels.

GENERALIZATIONS

1. Creativity is the capacity to innovate, invent, or recognize elements in ways new to the individual.
2. The environmental climate the allows freedom for an individual to explore, to express, and to test, will foster creativity.
3. Play, including the equipment, is functional when it is geared to the stage of the development of the child.

GOAL C. To develop ability to guide children's play.

TOPIC IV. Caring for children from 1 to 6 years of age.

GOAL A. To understand the relationship of patterns of child development and caring for the child.

GENERALIZATIONS

1. An understanding of children is essential as a bases for providing the type of enviornment conducive to maximum development.
2. The older person is responsible for providing the environment in which a child develops.

GOAL B. To develop criteria for use in guiding the young child.

GENERALIZATION

1. Consitency in type of guidance from older persons tends to strengthen a child's pattern of behavioral response.

GOAL C. To understand the role of an older individual in the play-life of the child.

GENERALIZATION

1. Adults can establish relationship with children through guidance of play activities.

GOAL D. To recognize one's own assets and limitations in caring for small children.

GENERALIZATIONS

1. The more secure the older individual, the more open he can be in relating to the child's world.
2. An individual is never a completed being; he is always developing.
3. The process of coping is purposeful problem-solving behavior which is related to experience and knowledge.

GOAL E. To understand ways of maintaining a safe environment and be able to meet emergencies when caring for children.

GENERALIZATIONS

1. Cooperation and caution in any activity may prevent serious accidents and injuries to children.
2. Some play activities must be restricted because of the danger involved.
3. Children will accept reasonable rules about where and how to play.
4. In case of an emergency, one should keep calm, act quickly, and know what to do.
5. A child's safety in emergencies often depends upon prompt response to adult commands.